National Institute of Environmental Health Sciences

Hospitalizations for varicella in children and adolescents in a referral hospital in Hong Kong, 2004 to 2008: A time series study

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Abstract:

BACKGROUND: Varicella accounts for significant morbidities and remains a public health issue worldwide. Climatic factors have been shown to associate with the incidence and transmission of various infectious diseases. We describe the epidemiology of varicella in paediatric patients hospitalized at a tertiary referral hospital in Hong Kong from 2004 to 2008, and to explore the possible association between the occurrence of varicella infection and various climatic factors. METHODS: The hospital discharge database of Princess Margaret Hospital was retrospectively analyzed for admissions associated with varicella from 2004 to 2008. Meteorological data were obtained from the monthly meteorological reports from the Hong Kong Observatory website. Time series analysis was performed with Poisson regression using a Generalized Estimating Equation (GEE) approach. RESULTS: During the study period, 598 children were hospitalized for varicella. The mean age on admission was 57.6 months, and the mean duration of hospitalization was 3.7 days. The overall complication rate was 47%. The mean monthly relative humidity, especially in cool seasons, was inversely correlated with the monthly varicella cases of the same month. CONCLUSIONS: Varicella can lead to serious complications and prolonged hospitalization, even in previously healthy children. Lower relative humidity in cool seasons is associated with higher number of paediatric varicella hospital admissions. These findings are useful for a better understanding of the pattern of paediatric varicella hospitalization in Hong Kong.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3119164

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Precipitation, Temperature

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: China

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Airborne Disease

Airborne Disease: Other Airborne Disease

Airborne Disease (other): Varicella

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content